might be compared with the progress between the first and second trials with the right hand. A greater amount of improvement comes within the first figure than between the first and second, and thus a large part of the apparent effect of the practice with the right upon the left is illusory. In the third section of the tests for attention the observer is asked to look at a group of words consisting of five English words and twenty Greek words, and the fact that the English words are remembered in greater proportion than the Greek words is ascribed to the clearer comprehension of the English words. But in a group of five italicized words and twenty words in ordinary type the italicized words were noticed in greater proportion than the unitalicized. This is ascribed to contrast. At least part of the result in the former case was also, then, due to contrast, and in order to isolate the effect of clearness an equal number of English and Greek words should be chosen. In the fourth section, under attention, the "law of counter attraction" is illustrated by the fact that one can grasp about all of a group of five words, half of a group of ten words, and one-fifth of a group of twenty-five words. This would seem to be due rather to the limitation of the scope of attention. Finally, in the experiment on memory, two selections are given to be memorized, the one by the whole and the other by the part method, with a view to comparing the efficiency of the two methods. It is evident, however, that the shortness of the selections—eight lines each—makes them especially adapted to the whole method, and that a study of the relative applicability of the two methods should include longer and more difficult selections.

As was said at the beginning, this work is a pioneer in the field, and as such is a valuable contribution to educational psychology, for which every worker in the field will be grateful. It will doubtless be widely used as a text where courses in educational psychology are given, and will be freely borrowed from even when not used as a text.

FRANK N. FREEMAN

THE SCHOOL OF EDUCATION
THE UNIVERSITY OF CHICAGO

Practical Botany. By JOSEPH Y. BERGEN and OTIS W. CALDWELL. Boston: Ginn & Co., 1911. Pp. vii+545. Illustrated.

This book represents very clearly a breaking away from the conventional text for high-school botany. Its authors are well known as successful writers of botanies for high schools, and this volume, as was to be expected, sustains their reputation for good science and good book-making. The keynote is no longer the discipline of the laboratory, but the acquisition of information regarding the world's work. For the last five years the schools have been beset on all sides with the clamor for vocational studies, and the school men, in the writer's opinion, have not courageously met and directed the demand for change. It seems to be accepted that change we must have. Business and manual training and agriculture would crowd from their time-honored seats the classics and pure science.

Confining our review to biological studies, it may be said that various methods have been suggested for meeting the situation. Some desire that botany and zoölogy be replaced by agriculture and the so-called civic biology; others would precede these more practical courses by courses in botany and zoölogy; while still others would make a sort of combination of applied and pure science, both to be given in a single course.

It is the last method that the book before us attempts. After two chapters on the work and general relations of plants in nature, the authors give 130 pages to the morphology, work, and uses of the roots, stems, leaves, flowers, and fruits of higher plants. Then follow 230 pages on the study of groups, from the bacteria to flowering plants, in which, not only the usual morphology is given, but the relations of various plants in agriculture, the industries, and hygiene are dwelt on; and this extensive treatment is followed by 125 pages on forestry, plant breeding, plant industries, weeds, and ecological groups.

The book is not a laboratory guide for the pupil; it is a text of over 500 pages from which he may recite for a year. The skilful teacher can make an accompanying guide for the laboratory, and make the laboratory work botany, agriculture, "civic biology," or a combination of all these. The unskilled teacher, in using the book, will probably degrade the work into mere textbook-learning.

With so much attention given to the diverse applications of science, the book necessarily lacks the unity of the manuals now generally used. This lack of unity, lack of progress in the course, with the still more serious departure from the strict training the laboratory method has boasted, and the substitution therefor of the acquisition of a great body of data without personal experience in its acquisition—these things make the book an experiment for all laboratory sciences in the secondary schools. But apparently the schools are determined to make the experiment, and it is well that they have such a worthy book as the present one to aid them.

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THE UNIVERSITY OF MICHIGAN

Opportunities in School and Industry for Children of the Stockyards District. By ERNEST L. TALBERT. Chicago: The University of Chicago Press, 1911. Pp. vi+64. 25 cents.

This is a report of one of six studies which have been made by the University of Chicago Settlement of the conditions of Chicago's stockyards community. The study in question confines itself to a consideration of the problems relating to children between fourteen and sixteen years of age.

Although the report relates to a single locality, it has a wide significance, because it is indicative of the kind of information which is being sought in many of our cities and which is now recognized as pertinent to educational discussions. The value of the report is enhanced by the background of personal relationship which exists between the individuals "investigated" and the University of Chicago Settlement workers. It is interesting to note that the conclusions quite generally reinforce those which have been reached by investigations of a purely statistical nature covering much larger fields.

The scope of Dr. Talbert's investigation is concisely stated in his introduction to the report as follows:

"What are the industrial opportunities for children, especially those between fourteen and sixteen years of age, in the stockyards district? What are the jobs they secure, their wages, and the chances for advancement? Does the public school adjust them to the economic environment? What is the attitude of parent and child to the school and to the job? What is the relation of the income of the family to the early leaving of school? What is done to bridge the gap between school and work, and to